Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (currently amended) A method of operation within a database system, the method comprising:

receiving a request to execute a query;

in response to receiving the request to execute the query, before compiling the query for query execution, performing:

determining that a collection of data elements to be returned by the query corresponds to a first data structure containing data fields, wherein the data fields are not specified by a data type definition within a type dictionary of the database system;

obtaining attribute values that respectively describe the data fields within the first data structure; and

recording, within the type dictionary, a first data type definition that specifies the data fields described by the attribute values;

and

removing the first data type definition from the type dictionary when [[any]] one of the following events occurs: a) execution of the query is complete, b) a compilation of the query is deleted from system memory, or c) a process identifies a flag, in the first data type definition, that the first data type definition is a query duration type.

2.   (original) The method of claim 1 further comprising recording, within the type dictionary, a second data type definition that defines an array of the first data type.

3.   (original) The method of claim 1 wherein obtaining attribute values that describe respective data fields within the first data structure comprises querying a data source to obtain the attribute values.

4.   (original) The method of claim 3 wherein querying the data source to obtain the attribute values comprises communicating with a remote processing system via a network of one or more computer systems.

5.   (original) The method of claim 1 wherein the first data structure includes rows and columns of data values, and wherein obtaining attribute values that describe respective data fields within the first data structure comprises obtaining a list of column names and column types.

6.   (original) The method of claim 1 further comprising determining whether any of the attribute values describes a data field having a plurality of component data fields.

7.   (original) The method of claim 6 further comprising obtaining attribute values that describe the plurality of component data fields.

8.   (original) The method of claim 1 wherein recording a first data type definition comprises:
        generating a data type name;
        associating the data type name with names of the data fields; and
        recording the data type name and the names of the data fields in the type dictionary.

9.   (original) The method of claim 8 wherein generating the data type name comprises incrementing an identifier value associated with a previously generated name, the incremented identifier value constituting, at least in part, the data type name.

10.   (original) The method of claim 8 wherein the names of the data fields are included in the attribute values and wherein associating the data type name with the names of the data fields comprises specifying the names of the data fields as component data elements of the first data type definition.

11-14. (canceled)

15.   (original) The method of claim 1 wherein receiving a request to execute a query comprises receiving a request to execute a function that returns a collection of aggregate data values.

16.   (previously presented) The method of claim 1 wherein determining that a collection of data elements to be returned by the query corresponds to a first data structure containing data fields comprises determining that a predetermined return type is indicated by the query.

17.   (original) The method of claim 16 wherein the predetermined return type corresponds to an array of aggregate values and indicates that each of the aggregate values includes component values in accordance with the first data structure.

18.   (currently amended) A database system comprising:

 a processing entity; and

 a memory coupled to the processing entity and having a dictionary of data type

   definitions stored therein, and further having program code stored therein which,

   when executed by the processing entity, causes the processing entity to:

   receive a request to execute a query;

   in response to receiving the request to execute the query, before compiling the

     query for query execution, performing:

     determining that a collection of data elements to be returned by the query

      corresponds to a first data structure containing data fields,

       wherein the data fields are not specified by a data type definition

       within a type dictionary of the database system;

     obtaining attribute values that respectively describe the data fields within

       the first data structure; and

     recording, within the type dictionary, a first data type definition that

       specifies the data fields described by the attribute values;

    and

    removing the first data type definition from the type dictionary when [[any]] one

of the following events occurs: a) execution of the query is complete, b) a compilation of the query is deleted from system memory, or c) a process identifies a flag, in the first data type definition, that the first data type definition is a query duration type.

19.   (original) The system of claim 18 wherein the processing entity comprises a plurality of processors coupled to one another in a network.

20.   (original) The system of claim 19 wherein the memory comprises a plurality of sets of storage devices, each set of storage devices being coupled to at least one of the processors and including at least one non-volatile storage device.

21.   (currently amended) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to:

receive a request to execute a query;

in response to receiving the request to execute the query, before compiling the query for query execution, performing:

determine that a collection of data elements to be returned by the query corresponds to a first data structure containing data fields, wherein the data fields are not specified by a data type definition within a type dictionary of the database system;

obtain attribute values that respectively describe the data fields within the first data structure; and

record, within the type dictionary, a first data type definition that specifies the data fields described by the attribute values; and

remove the first data type definition from the type dictionary when [[any]] one of the following events occurs: a) execution of the query is complete, b) a compilation of the query is deleted from system memory, or c) a process identifies a flag, in the first data type definition, that the first data type definition is a query duration type.